Chapter 5: Consultation and Coordination

5.1 Planning Team Members and Consultation

5.1.1 Tribes, Individuals, Organizations and Agencies Consulted

The following persons, organizations, and agencies were consulted during preparation of this analysis. Inclusion of an organization or individual's name below should not be interpreted as their endorsement of the analysis or conclusions.

Comment letters were received from ten individuals and four organizations during the public scoping period held from Dec 5, 2008 to January 23, 2009. Organization comments included:

Resort Improvement District Number 1 – Shelter Cove – Humboldt County, CA

Bear River band of the Rohnerville Rancheria

Backcountry Horsemen of California Inc.

Sierra Club North Group, Redwood Chapter

In addition, the California Department of Fish and Game, California Coastal Commission (Federal Consistency) and California Department of Forestry and Fire Protection were contacted.

A summary of scoping issues is contained in Appendix A.

5.1.2 Planning Team Members

Name	Position
Derek Carr	Park Ranger
Bruce Cann	Outdoor Recreation Planner
Sam Flanagan	Geologist
Paul Fritze	GIS Specialist
David Fuller	Fishery Biologist
Jared Hammatt	Prescribed Fire and Fuels
Hank Harrison	Forester
Jesse Irwin	Wildlife Biologist
David Johnson	Archaeologist and Tribal Liaison
Tim Jones	Fire Management Scientist
David Lefevre	Outdoor Recreation Planner
Zach Marine	Chicago Botanical Intern
Lauren Pidot	Presidential Management Fellow
Gary Pritchard-Peterson	King Range NCA Manager
Lynda Roush	Arcata Field Manager
Clara Sander	Realty Specialist
Kathy Stangl	Arcata Assistant Field Manager
Jennifer Wheeler	Botanist
Bob Wick	Planning and Environmental Coordinator

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Appendix A – Planning Issues – Internal and External Scoping

A planning issue is a point or matter of discussion, debate, or dispute about the potential environmental effects or impacts of an action. Issues drive the development of alternatives to meet the objectives of the plan. A list of planning issues was developed based upon comments from the public and BLM staff. The following section is a summary of these planning issues that were addressed in the proposed action or no action alternatives.

Public Use—Solitude or Primitive and Unconfined Recreation

Public Use Issue 1: Management of Solitude or Primitive and Unconfined Recreation Opportunities

Providing outstanding opportunities for solitude or a primitive and unconfined type of recreation is a purpose for all wilderness areas. Monitoring of public use within the wilderness indicates that these opportunities exist, to various degrees, during much of the year. However, during the certain holidays and throughout much of the summer season, public use increases substantially. As a result, opportunities for solitude are noticeably diminished in some areas, particularly along the Lost Coast Trail. In addressing this issue, the plan will answer the following questions:

- What standards will be used to define use-capacity and desired conditions for solitude or primitive conditions in the wilderness?
- How will the BLM measure and monitor the level of public use, visitor solitude, and primitive conditions?
- What actions will be taken if standards for solitude are exceeded?
- How will visitor impacts, such as improper disposal of human waste be addressed?
- How will the BLM facilitate public use opportunities (e.g. through the maintenance of trails) while maintaining acceptable conditions for solitude and the primitive character of the wilderness?

Public Use Issue 2: Management of Visitor Education, Interpretation, and Law Enforcement

A substantial amount of work has been done to educate visitors about the importance of the wilderness and proper backcountry ethics and allowable uses within the wilderness. While law enforcement presence can detract from the unconfined and unrestricted nature of the wilderness setting, it is important that routine law enforcement actions be applied within wilderness where necessary to provide public safety and accomplish wilderness objectives. The majority of violations continue to be violations of campfire, bear can, and backcountry permit regulations, illegal vehicle use, littering, and vandalism. In addressing this issue the plan will answer the following questions:

- What information will the BLM provide visitors to increase awareness of wilderness regulations, proper backcountry use practices, safety considerations, and recreation opportunities within the wilderness?
- Other than trail signs, what types of visitor education and information should be provided on-site, within the designated wilderness area?
- What pubic interpretation programs are needed to support wilderness management?
- What is the minimum level of management presence and law enforcement needed to ensure the public is informed and to protect the resources from unacceptable impacts?

Private Land/Neighboring Land and Use Authorizations—Undeveloped Setting

Undeveloped Setting Issue 1: Management of Valid Existing Rights and Use Authorizations

Various uses existing within the King Range Wilderness prior to the Wilderness Act, the King Range Act, or the Northern California Coastal Wild Heritage Wilderness Act are considered "valid existing rights." These rights include life estates, deeded easements, rights-of-ways ROW, and access to, or use of, private inholdings. These uses can create impacts to the King Range Wilderness undeveloped quality. In addressing these recognized rights in the plan, the BLM will answer the following questions:

- For private inholdings within the King Range Wilderness, how will access, development, or uses be authorized to provide for reasonable use of private lands, while protecting the wilderness character?

- How will ROW be managed to best maintain or enhance wilderness character?
- How will livestock leases be administered to minimize impacts to wilderness character?

Natural Resource Management and Restoration—Naturalness

Naturalness Issue 1: Management of Wildlife and Fisheries Habitat

The King Range Wilderness provides habitat for a number of sensitive wildlife populations. While some populations appear to be stable, other populations may require special management to ensure their survival and to meet requirements of the Endangered Species Act. In addressing this issue the plan will answer the following questions:

- What actions will be taken to protect the northern spotted owl from barred owl encroachment?
- How will future monitoring efforts be used in conjunction with existing information to track trends in resource condition through time?

Naturalness Issue 2: Introduction and Spread of Non-native Invasive Species and Control

A number of invasive plant populations have been identified within the King Range Wilderness. The presence of non-native species is generally perceived as an unnatural condition and a negative impact to wilderness character. There are a variety of strategies that have been used and may be used to control and eradicate invasive species. In addressing this issue the plan will answer the following questions:

- What treatment methods will be used within the wilderness areas?
- What methods will be used to conduct inventory and monitoring for invasive species?
- What other management actions are necessary to reduce the potential for establishment and spread of invasive non-native species?

Fire and Search and Rescue—Untrammeled Condition

Untrammeled Issue 1: Fire Management

In managing fire within the King Range Wilderness, the BLM must balance the need for some fire suppression with the impacts of such suppression on wilderness character. Given the wilderness size, complex topography, potential fire behavior, and proximity to private lands some

level of regular suppression is inevitable. In addressing this issue the plan will answer the following questions:

- What are the minimum tool(s) for fire management in the wilderness?
- How will fire be used to maintain or achieve natural conditions, while protecting safety and property of staff and private residences?
- How will post-fire stabilization and rehabilitation efforts be conducted within wilderness to minimize impacts to wilderness character?
- How will wildfire be managed to protect inholders and adjacent private lands?

Untrammeled Issue 2: Management of Search and Rescue Operations

Motorized vehicles, mechanized equipment, and aircraft can be used for SAR emergencies. Avoiding confusion and making sure these activities are carried out quickly and efficiently is imperative for public safety. In addressing this issue the plan will answer the following questions:

- What actions should be taken to assist the responsible local agencies in meeting their SAR responsibilities within wilderness?
- How will requests to conduct SAR training within wilderness be handled?

Research and Traditional Uses—Special Values

Special Values Issue 1: Research Activities Within Wilderness

Research activities within the King Range Wilderness and Rocks and Islands Wilderness have the potential to impact wilderness values and the wilderness experience. In addressing this issue the plan will answer the following questions:

- How will research within wilderness be conducted to increase understanding of natural processes and cultural resources?
- How will research be authorized to provide meaningful information to guide management decision-making while protecting the wilderness environment?

Special Values Issue 2: Traditional Native American Uses

Tribal members periodically request access to use wilderness for traditional gathering, archaeological research, and mitigation, as well as for ceremonial purposes. The Wilderness Act specifically allows for continued access by tribal interests for these purposes, but requires that these

uses be managed to preserve wilderness character. In addressing this issue the plan will answer the following question:

- How will access by tribal members to cultural sites be authorized?

Issues Resolved Through Existing Policy and Planning, or Otherwise Outside of the Scope of this Plan

Several concerns were brought up during the scoping process that have either been addressed through existing planning efforts or BLM policy, or are otherwise outside of the scope of this effort. These concerns are described below along with a rationale for why they are not being analyzed.

1) Issue: The BLM should acquire additional lands within and surrounding the wilderness. The King Range NCA RMP allows for acquisition of additional lands within the NCA boundary. Also, the Arcata Field Office RMP, which guides management of lands surrounding the King Range NCA, allows for acquisition of lands within the King Range vicinity if these lands will benefit the management or public values of the area. Wilderness designation does not affect the land acquisition program, except that wilderness inholdings are given priority for acquisition.

2) Issue: The BLM should remove seasonal road closures. Transportation within the King Range NCA was addressed in the RMP and is outside the scope of this effort. Expansion of season of use on roads closed during the winter was considered within the RMP, but was not selected for implementation due to public safety and resource protection concerns.

3) Issue: Continue hunting as a legitimate wilderness use. The King Range NCA RMP discusses wildlife management within the planning area. Hunting is considered to be a legitimate use of wilderness and will not be affected by the designation or this plan.

4) Issue: Provide additional trails and trail signing. Provide opportunities for mobility-impaired visitors. The King Range NCA RMP discusses additional trails planned within the King Range Wilderness including short trails within Hidden Valley and the Mill Creek watersheds to accommodate a wider-range of abilities. The RMP also outlines rustic/minimal levels of trail signing that are compatible with wilderness management. With the exception of implementing the Mill Creek trail, the scope of this plan will be limited to discussing types of signing and levels of trail maintenance required to provide for primitive and unconfined recreation opportunities while protecting other wilderness

characteristics. The Hidden Valley Trail was analyzed under a separate project-level EA prior to construction.

5) Issue: How will future acquisitions by the BLM be treated with respect to wilderness? The Wilderness Act provides for incorporation of private land inholdings within the wilderness upon acquisition by the BLM. Acquired lands would become part of the wilderness area and would be managed under the direction of the wilderness management plan. No additional planning or management actions are required.

6) Issue: The BLM should manage growth of Shelter Cove because of impacts on the wilderness and King Range NCA. The community of Shelter Cove is located outside of the King Range Wilderness and the scope of this planning effort. The King Range NCA RMP discusses management goals and allowable uses on public lands within Shelter Cove.

7) Issue: Existing RMP decisions need revisiting in light of new wilderness designation. The portion of the NCA that was designated as wilderness has long been managed to protect and restore wilderness values. The RMP was written for compatibility with wilderness designation. This plan clarifies and modifies some of the specific ways that management actions will be implemented in wilderness (e.g., use of non-mechanized equipment for routine trail maintenance).

8) Issue: Impacts from uncontrolled/unleashed dogs. Current Humboldt County regulations are in effect which require dogs to be leashed or under voice command at all times. Dogs must be leashed in developed areas.

9) Issue: Improve deer habitat through prescribed burning. The King Range NCA RMP includes use of prescribed burning to restore and maintain wildlife habitat outside of the wilderness boundary. Natural fires, such as the 13,000 acre Honeydew Fire, are expected to continue within the wilderness.

10) Issue: The BLM should provide a buffer between motorized access points and fuel wood cutting and the wilderness boundary. In most cases, existing trailheads are not spurs, but are located along motorized routes that were designated for vehicle use under the King Range RMP and provide access for campgrounds, trails and other uses/management of the area. The Hidden Valley Trailhead is on a short spur from a county road, and is proposed for relocation immediately adjacent to the county road (project underway in a separate analysis). The BLM does not routinely provide woodcutting permits in the King Range NCA. A very limited number of permits are issued in specific circumstances in

response to windthrow events or habitat improvement treatments outside of the wilderness.

11) Issue: BLM should enforce the prohibition of non-emergency boat landings along the Lost Coast. The BLM is authorized to enforce motorized boat landings within the coastal zone (below the mean high tide) under a permit from the California Coastal Commission.

12) Issue: BLM should manage non-wilderness recreation use to minimize impacts to wilderness character? Recreational use of adjacent, non-wilderness lands is not within the scope of the wilderness plan.

13) Issue: BLM should develop a trail connecting the King Range Wilderness to public lands to the east in the area of Gilham Butte. Gilham Butte and other non-wilderness lands to the east of the King Range Wilderness are outside the scope of the wilderness management plan.

Appendix B – Congressional Wilderness Grazing Guidelines

Excerpt from Public Law 101-628 §101(f)

Grazing in National Forest Wilderness Areas (and BLM Wilderness Areas)

Section {(d) (4) (2) of the Wilderness Act states: "the grazing of livestock where established prior to the effective date of this Act, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the Secretary of Agriculture."

The legislative history of this language is very clear in its intent that livestock grazing, and activities and the necessary facilities to support a livestock grazing program will be permitted to continue in National Forest wilderness areas, when such grazing was established prior to classification of an area as wilderness.

Including those areas established in the Wilderness Act of 1964, Congress has designated some 188 areas, covering lands administered by the Forest Service, Fish and Wildlife Service, National Park Service and Bureau of Land Management as components of the National Wilderness Preservation System. A number of these areas contain active grazing programs, which are conducted pursuant to existing authorities. In all such cases, when enacting legislation classifying an area as wilderness, it has been the intent of the Congress, based on solid evidence developed by testimony at public hearings, that the practical language of the Wilderness Act would apply to grazing within wilderness areas administered by all Federal agencies not just the Forest Service. In fact, special language appears in all wilderness legislation, the intent of which is to assure that the applicable provisions of the Wilderness Act, including Section 4(d) (4)(2), will apply to all wilderness areas, regardless of agency jurisdiction.

Further, during the 95th Congress, Congressional committees became increasingly disturbed that, despite the language of Section 4(d) (4) (2) of the Wilderness Act and despite a history of nearly 15 years in addressing and providing guidance to the wilderness management agencies for development of wilderness management policies, National Forest administrative regulations and policies were acting to discourage grazing in wilderness, or unduly restricting on-the-ground activities

necessary for proper grazing management. To address this problem the House Committee on Interior and Insular

Affairs Reports (95-20 and 95-21) specifically provided guidance as to how Section 4(d) (4) (2) of the Wilderness Act should be interpreted. This guidance appeared in these reports as follows:

Section 4(d) (4) (2) of the Wilderness Act states that grazing in wilderness areas, if established prior to designation of the area as wilderness, "shall be permitted to continue subject to such reasonable restrictions as are deemed necessary by the Secretary of Agriculture". To clarify any lingering doubts, the committee wishes to stress that this language means that there shall be no curtailment of grazing permits or privileges in an area simply because it is designated as wilderness. As stated in Forest Service regulations (36 CFR 393.7) grazing in wilderness areas ordinarily will be controlled under the general regulations governing grazing of livestock on National Forests .... This includes the establishment of normal range allotments and allotment management plans. Furthermore, wilderness designation should not prevent the maintenance of existing fences or other livestock management improvements, nor the construction and maintenance of new fences or improvements which are consistent with allotment management plans and or which are necessary for the protection of the range.

Despite the language of these two reports, RARE II hearing and field inspection trips in the 96th Congress have revealed that National Forest administrative policies on grazing in wilderness are subject to varying interpretations in the field and are fraught with pronouncements that simply are not in accordance with Section 4 (d)(4)(2) of the Wilderness Act. This led to demands on the part of grazing permittees that Section 4(d) (4) (2) of the Wilderness Act be amended to clarify the intention of Congress. However, because of the great t diversity of conditions under which grazing uses (including different classes of livestock) are managed on the public lands, the Conferees feel that the original broad language of the Wilderness Act is best left unchanged. Any attempts to draft specific language covering grazing in the entire wilderness system (presently administered by four separate agencies in two different Departments) might prove to be unduly rigid in a specific area and deprive the land management agencies of flexible opportunities to manage grazing in a creative and realistic site specific fashion.

Therefore the conferees declined to amend Section 4(d) (4) (2) of the Wilderness Act, agreeing instead to reaffirm the existing language and to include the following or nationwide guidelines and specific statements of legislative policy. It is the intention of the conferees that the

guidelines and policies be considered in the overall context of the purposes and direction of the Wilderness Act of 1964 and this Act and that they be promptly, fully, and diligently implemented made available to Forest Service personnel at all levels and to all holders of permits for grazing in National Forest Wilderness areas:

1. There shall be no curtailments of grazing in wilderness areas simply because an area is or has been designated as wilderness, nor should wilderness designations be used as an excuse by administrators to slowly "phase out " grazing. Any adjustments in the numbers of livestock permitted to graze in wilderness areas should be made as a result of revisions in the normal grazing and land management planning and policy setting process, giving consideration to legal mandates, range condition, and the protection of the range resource from deterioration.

It is anticipated that the numbers of livestock permitted to graze in wilderness would remain at the approximate levels existing at the time an area enters the wilderness system. If land management plans reveal conclusively that increased livestock numbers or animal unit months (AUMs) could be made available with no adverse impact on wilderness values such as plant communities, primitive recreation. and wildlife populations or habitat, some increases in AUMs may be permissible. This is not to imply, however that wilderness lends itself to AUM or livestock increases and construction of substantial new facilities that might be appropriate for intensive grazing management in non-wilderness areas.

2. The maintenance of supporting facilities, existing in an area prior to its classification as wilderness (including fences, line cabins, water wells and lines, stock tanks, etc.), is permissible in wilderness. Where practical alternatives do not exist, maintenance or other activities may be accomplished through the occasional use of motorized equipment. This may include, for example, the use of backhoes to maintain stock ponds, pickup trucks for major fence repairs, or specialized equipment to repair stock watering facilities. Such occasional use of motorized equipment should be expressly authorized in the grazing permits for the area involved. The use of motorized equipment should be based on a rule of practical necessity and reasonableness. For example, motorized equipment need not be allowed for the placement of small quantities of salt or other activities where such activities can reasonably and practically be accomplished on horseback or foot. On the other hand it may be appropriate to permit the occasional use of motorized equipment to haul large quantities of salt to distribution points. Moreover, under the rule of reasonableness, occasional use

of motorized equipment should be permitted where practical alternatives are not available and such use would not have a significant adverse impact on the natural environment. Such motorized equipment uses will normally only be permitted to those portions of a wilderness area where they had occurred prior to the area's designation as wilderness or are established by prior agreement.

3. The replacement or reconstruction of deteriorated facilities or improvements should not be required to be accomplished using "natural materials", unless the material and labor costs of using natural materials are such that their use would not impose unreasonable additional costs on grazing permittees.

4. The construction of new improvements or replacement of deteriorated facilities in wilderness is permissible if in accordance with those guidelines and management plans governing the area involved. However, the construction of new improvements should he primarily for the purpose of resource protection and the more effective management of these resources rather than to accommodate increased numbers of livestock.

5. The use of motorized equipment for emergency purposes such as rescuing sick animals or the placement of feed in emergency situations is also permissible. This privilege is to be exercised only in true emergencies, and should not be abused by permittees.

In summary, subject to the conditions and policies outlined above, the general rule of thumb on grazing management in wilderness should be that activities or facilities established prior to the date of an area's designation as wilderness should be allowed to remain in place and may be replaced when necessary for the permittee to properly administer the grazing program. Thus, if livestock grazing activities and facilities were established in an area at the time Congress determined that the area was suitable for wilderness and placed the specific area in the wilderness system, they should be allowed to continue. With respect to areas designated as wilderness prior to the date of this Act, these guidelines shall not be considered as a direction to reestablish uses where such uses have been discontinued.

It is also the understanding of the conferees that the authorizing Committees intend to closely monitor the implementation of the guidelines through subsequent oversight hearings to insure that the spirit, as well as the letter, of the guidelines is adhered to by the Forest Service. Of course, the inclusion of these guidelines in this Joint Statement of Managers does not preclude the Congress from dealing with the issue of grazing in wilderness areas statutorily in the future.

Appendix C – Minimum Requirements Decision Summaries

Introduction

Throughout the proposed action the terms, "minimum requirement" or "minimum tool" are used as shorthand to refer to the provisions found in section 4(c) of the 1964 Wilderness Act. Section 4(c) of the Act prohibits certain activities in wilderness by the public and, at the same time, allows the agencies to engage in those activities in some situations. Section 4 (c) states:

> *"Except as specifically provided for in this Act, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area."*

This appendix contains a minimum requirement decision analysis for administrative actions that would be expected to occur throughout implementation of the wilderness management plan; specifically actions which may require the placement of structures, use of motorized equipment or mechanical transportation, or other "non-conforming" actions within the wilderness. A variety of site-specific conditions, risks to safety or resources, special provisions or valid existing rights, or other legislated requirements are detailed and the guidelines for implementing non-conforming actions are outlined.

In conformance with wilderness management guidance, restricted uses would be limited to situations or conditions where public or staff safety is a consideration, where the benefits to wilderness resources are outweighed by the impacts of temporary non-conforming actions, where short-term trammeling actions would allow natural processes to predominate in the long-term, and where certain valid and existing rights would be accommodated as required under the act. For non-recurring

actions (e.g., a specific scientific research project), a site specific minimum requirements analysis would be completed at the time the project is proposed.

Native Plant Reintroduction and Restoration – Vehicle Transport

Situation Description

At the time of wilderness designation, the grassland habitats of the King Range had been dramatically impaired from over 100 years of intensive land management practices and inadvertent invasive species introductions. These changes have not been brought on by the forces of nature, but rather are an imprint of man's work, that affects the ecological function, scientific value, and naturalness of this wilderness. Motorized transportation of plant materials for restoration purposes ensures the success of restoration efforts.

Is it necessary to reintroduce native plants into the wilderness?

The action is necessary to preserve the qualities of wilderness character, including the area's naturalness. In an unimpaired ecological grassland setting, native perennial grasses would be performing many natural functions that would be expected in unaltered California grassland. In a natural condition, native perennial bunchgrass would be 1) present in abundance and providing deep soil stability and rooting depth, 2) recycling deep nutrients and water that have leached below the shallow root zone of annuals, 3) staying green longer extending the available green forage for wildlife, 4) lowering fire intensity because of their increased year-round moisture content, 5) providing increased floral biodiversity and associated fauna, 6) preventing invasive, non-native plant establishment, and 7) providing natural landscapes for wilderness visitors.

Alternatives:

No Action – Native species would not be replanted in the area. This alternative would result in continued reduction in the areas naturalness as non-native grasslands would dominate the coastal prairies. The no action alternative would reduce trammeling in the wilderness and is assessed in the wilderness plan EA.

Proposed Action- The proposed action identifies the need for both small and large scale plantings. The use of motorized transport would only be used where large scale plantings are necessary.

Relatively small plantings (less than two species colonies at 500 plugs per colony, or about 200 pounds of plant material plus equipment weight)

could and would be accomplished by using pack animals. Generally, 98 plugs are stored and transported in plastic trays that make propagation and transport of plugs practical. Transport of plugs in these trays via pack animal is not possible, but the plugs could be placed in twin bags that are worn by tree planters, and could be slung over livestock. The number of bags an animal could carry would depend on the type of stock animal used, and is generally 20 percent of body weight. Two colonies would require two to four pack animals. A planting of 500 plugs planted on 18 inch centers affects about 1,100 square feet or about 0.025 acre.

Larger plantings of more than 1,000 plugs would have a greater effect on reclaiming native and natural landscapes. Typically, a planting that would have a reasonable positive impact might involve planting 30 to 60 colonies comprised of several different species. If 60 colonies were planted, trammeling would occur on approximately 1.5 acres, but if the colonies are well spaced to allow for natural expansion between the colonies, the plantings could naturally spread to benefit more acreage. Planting 60 colonies would represent about 30,000 plugs, or 6,000 lbs of plant material, stacked in trays holding 98 plugs per tray. Larger plantings, therefore, would not be feasible to implement using stock animals alone for transport of materials.

Conclusion and Determination of Minimum Activity

Motorized vehicle use may be necessary to accomplish the proposed action of larger plantings of more than 1,000 plugs where foot or pack animal transportation is not feasible. Motorized transport would be authorized for projects where the volume and care of plant material to be planted at a given project site is such that the use of pack animals, human transporters, or helicopter sling loading is not feasible. The following guidelines would be applied:

Motorized transport of plant materials would only be authorized on the routes identified in Figure 2-12 as 1) the access corridor to private property designated by Public Law 109-362, and 2) the access route to Life Estate A.

Only one time vehicular ingress and egress of materials and tools to the project site would be authorized.

Workforce members and associated camping gear would be hiked-in to minimize impact to wilderness character.

Vehicular transport would be restricted to the low visitor use window between November and February; a time typically undesirable to back country users, but desirable for plant transplantation.

Fuel Break Maintenance

Situation Description

The long-term goal for fire management in the King Range Wilderness is to allow for the natural dynamics of fire within the ecosystem, while minimizing threat of escape and damages to private property. The King Range Fuel Break System, primarily along the eastern wilderness boundary, establishes pre-determined fire control lines of reduced fuel loading outside of the wilderness. However, given the heavy accumulations of fuels and naturally occurring high-intensity fire environment, the system is insufficient to allow for Wildland Fire Use. Therefore, fuel breaks will need to be strengthened. The proposed action would allow for small scale prescribed burning to strengthen and maintain fuel breaks, which may require the occasional use of powersaws to maintain firefighter safety and control.

Is maintenance of fuel breaks required?

The action is necessary to conform to direction contained in BLM policy to maintain firefighter and public safety.

The action is necessary to preserve the wilderness quality of naturalness, by aiding in the return of wild fire to the ecosystem and by preventing unnecessary incursions by heavy equipment during suppression activities.

Alternatives:

No Action – No prescribed burning would be conducted. This alternative would result in larger impacts to the wilderness during wildfire events as the fuel breaks would not be sufficient to prevent full-scale suppression efforts.

Proposed Action – Prescribed burning would be used to strengthen existing fuel breaks. The occasional use of powersaws would be authorized for specific circumstances where handlines are insufficient to protect safety and maintain control.

Conclusion and Determination of Minimum Activity

Prescribed burning would be authorized as an effort to improve the effectiveness of existing fuel breaks. Small-scale prescribed fire would be initiated from the fuel breaks and into the wilderness. Prescriptions shall be for low-intensity backing fire with minimal torching, and not be allowed to burn farther than 500 feet into the wilderness. The occasional use of motorized equipment may be necessary. The following guidelines would be applied:

Control would be performed using wet lines, hand lines, or cold trailing whenever feasible.

No heavy equipment will be used within the wilderness.

Chainsaw use maybe authorized in limited instances where large dead standing trees or dense concentrations of dead and down material compromise firefighter safety or control of firelines. Handlines would be established around such obstacles to avoid the need for powersaws wherever possible. Vehicular transport of crews into the wilderness would not be allowed.

No more than 2 miles along the fuel break shall be ignited at any time, to maintain control, and no more than 10 miles would be burned through prescribed fire activities in a single year in order to limit impact to scenic values.

Fire Suppression Damage Repair and Emergency Stabilization

Situation Description

Lightning caused fires are considered to be a natural part of the wilderness ecosystem. However, threats to private lands and communities surrounding the King Range Wilderness often necessitate the use of motorized equipment, including chainsaws and bulldozers, for suppression activities. Fireline damage repair must be conducted in order to restore and protect wilderness character (especially naturalness) in areas directly damaged during suppression activities. Emergency stabilization activities are needed to protect infrastructure such as trails, to address legacy impacts that create threats to natural resources, to prevent or remove weed infestations, or to reduce the threat of off-site damage to private lands from impacts of the fire itself. Damages and potential impacts may not be reparable before the rainy season begins without the use of heavy equipment, particularly where the use of heavy equipment for fire suppression has created large areas of disturbance.

Is the action necessary within wilderness?

The action is necessary to preserve the qualities of wilderness character, including the area's naturalness and opportunities for primitive and unconfined type of recreation.

Alternatives:

No Action – No fireline damage suppression repair or emergency stabilization would be conducted. This alternative would result in increased degradation of the area's naturalness, particularly from erosion of

firebreaks. The wilderness trail areas impacted by fire would also become inaccessible.

Proposed Action – Restoring hand-constructed fire lines in relatively small areas would be accomplished by using hand tools. However, restoring larger areas disturbed by heavy equipment may require the use of motorized equipment to address risks of erosion prior to the rainy season. Removal of large trees and jackstraws created by wildfire is discussed in the trail maintenance section.

Conclusion and Determination of Minimum Activity:

The use of motorized vehicles and equipment may be necessary for restoration activities. Restoration would be completed using non-motorized means whenever feasible (such as restoration of hand-constructed lines). Vehicle use would only be allowed if the project directly benefits wilderness character and would otherwise have adverse impacts on wilderness values if not implemented. The following guidelines would be applied:

Only BLM vehicles would be authorized for use in wilderness.

When vehicles are used on the Kinsey Ridge Trail, they would be parked out of sight from any point along the beach.

Vehicles would be allowed to the bottom of the Kinsey Ridge Trail only for a short period when immediately loading or unloading heavy materials.

Vehicle use would occur during periods when no visitors are on or within sight of the Kinsey Ridge Trail or Cooskie Creek Trail. If this is not possible, vehicle use would occur on weekdays when the least amount of visitors are known to be in this area.

Vehicle use would serve multiple objectives. Bundling multiple tasks/projects/purposes for each motor vehicle trip would be required.

Invasive, Non-native Species Removal

Situation Description

Invasive plant species pose a significant threat to the natural quality of the King Range Wilderness. In order to limit the spread of invasive plants, the BLM has undertaken prevention and eradication efforts. Proliferation of invasive species directly impacts native biodiversity, as well as ecological structure and function. The natural communities within wilderness are threatened by invasive species currently in and adjacent to the wilderness.

Is it necessary to limit the spread and/or eradicate invasive, non-native plant infestations in the wilderness and within 1 year of new detections?

The action is necessary to conform to policy contained in Executive Order 13112, signed February 3, 1999, which states that federal agencies shall use "relevant programs and authorities to: (i) prevent the introduction of invasive species; (ii) detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner; (iii) monitor invasive species populations accurately and reliably; (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded; (v) conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species; and (vi) promote public education on invasive species and the means to address them; and (3) not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions."

The action is also necessary to preserve the qualities of wilderness character, including the area's naturalness. Proliferation of invasive species directly impacts native biodiversity, as well as ecological structure and function. It can also potentially alter native gene pools through hybridization. All natural communities within wilderness are threatened by invasive species currently in and adjacent to the wilderness.

Alternatives

No-Action – New infestations of invasive, non-native plants would not be eradicated within 1 year of detection, resulting in continued spread of invasive plants, which may require more intensive eradication efforts in the future.

Proposed Action – Treat all newly discovered invasive plant infestation within 1 year of discovery.

Conclusion and Determination of Minimum Activity

Motorized vehicle use may be necessary to accomplish the proposed action, when it is not feasible to use foot or pack animals to transport tools, supplies, or equipment accompanying labor crews into wilderness.

Motorized vehicles would be authorized only to minimize safety risks to labor crews and to maximize the effectiveness of plantings. Motorized transport of supplies and crew members would be authorized for projects that involve invasive plant eradication during winter, where:

1. Transport by the use of pack animals, human transporters, or helicopter sling loading is not feasible.
2. Weather conditions create safety risks, such as below freezing temperature, high wind and/or heavy precipitation.
3. The project area is within poison oak vegetation, which can cause a dermatological rash necessitating outdoor camp showers and bathing stations for worker safety and would potentially require a more extensive need for base camp equipment and associated transport of supplies.

The following guidelines would be applied:

- The use of motorized vehicles would be authorized only when necessary as analyzed in Appendix C, and only on the routes identified in Figure 2-12 as 1) the access corridor to private property designated by Public Law 109-362, and 2) the access route to Life Estate A
- One-time vehicular ingress and egress of supplies to the project site would be authorized.
- Workforce members and associated camping gear would be hiked-in to minimize impacts to wilderness character.
- Vehicular access would be restricted to the low visitor use window between November and February; a time typically undesirable to back country users, but desirable for successful treatment efforts for some invasive plant species.

Livestock Grazing Management – Range Management Facilities

Situation Description

The Northern California Coastal Wild Heritage Wilderness Act, in accordance with Section 4(d) of the Wilderness Act, authorizes livestock grazing and the maintenance of existing facilities related to grazing within the King Range Wilderness, where established prior to wilderness designation. A variety existing support facilities, such as water troughs and ponds, must be maintained over time to ensure livestock distribution. The development of an additional water trough is proposed to improve livestock distribution in the Spanish Flat Allotment, by shifting heavy use in the Mackey Pasture and dissipating it northward into the Sea Lion Pasture.

Is it necessary to develop a livestock watering source in the wilderness?

No options exist outside of wilderness, because the Spanish Flat Grazing Allotment is entirely within designated wilderness. The action is necessary to conform to direction contained in CFR Part 4100 Grazing Administration – Exclusive of Alaska and specifically, Subpart 4180 Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration. Further, this action is necessary to conform to the regionally specific April 1998 United States Department of the Interior Bureau of Land Management Rangeland Health Standards and Guidelines for California and Northwestern Nevada. The action is also necessary to manage for conditions of naturalness within the allotment. Improved livestock distribution would aid in protection and recovery of native plant communities.

Alternatives:

No Action – Maintenance would not be authorized programmatically and a new water development would not be constructed.

Proposed Action – Subject to the conditions described in the proposed action of the wilderness management plan , motorized use would be authorized on existing access routes to conduct periodic maintenance activities. One new water development would be constructed to improve livestock distribution.

Conclusion and Determination of Minimum Activity

Motorized vehicle use may be necessary to accomplish the proposed action. Motorized use would be authorized to conduct livestock grazing range improvement projects that involve the transport of heavy and/or large materials in wilderness, where the weight and size of material to be installed or transported is such that the use of pack animals, human transporters, or helicopter sling loading is not feasible. The following guidelines would be applied:

- Motorized access to the project site would be authorized only on routes identified in Figure 2-12.
- One time vehicular ingress and egress of materials and tools to the project site would be authorized.
- Except for emergency repairs, motorized access would not be authorized during the peak visitor use periods, as described in the proposed action.

Trail Maintenance

Situation Description

The King Range Wilderness contains approximately 85 miles of hiking trails. Trail maintenance requires considerable time and budget expense annually, depending on the severity of winter storms and extended impacts from events such as major wildfires or large active slides. Most trail maintenance is performed using non-motorized hand tools such as McClouds and pulaskis for tread clearing and leveling, folding saws and loppers for small tree and brush removal, and crosscut saws for large fallen tree removal. Use of these tools is compatible with wilderness policy. Every year large trees up to five feet in diameter fall across the upland trails. Some sites may involve multiple trees which have fallen on top of each other at varying heights. Removing these "jackstraws" can present serious safety hazards, which can be reduced by using powersaws to accomplish the task.

Is trail maintenance necessary?

Trail maintenance is necessary to preserve primitive and unconfined recreation opportunities and to support a public purpose of wilderness (recreation).

Alternatives:

No-Action – Trails would be maintained using only non-motorized equipment.

Proposed Action – Trails would be maintained in accordance with Appendix E - Annual Trail Work Plan.

Conclusion and Determination of Minimum Activity:

Chainsaws would be necessary in certain situations, as described in Appendix E. The following guidelines would be applied:

1. All small trees (less than 6 inches in diameter), branches, and brush will be cut using non-mechanized tools such as hand saws and loppers. The only exception will be if smaller trees are downed together with larger trees resulting in a safety hazard. In this case, chainsaw use will be allowed to the extent that the safety hazard is eliminated;

2. Isolated medium/large sized trees (over 6 inches in diameter) will be cut using non-mechanized tools such as crosscut saws.

3. Multiple medium to large trees down in either one area or a large number of medium to large trees scattered along a short distance may be cut using chainsaws with the following provisions:

d. Chainsaw use will only be allowed on weekdays to avoid the busier times of the week and during seasons with historically lower visitation (after Labor Day weekend to just before Memorial Day weekend).

e. The use of chainsaws or other mechanical equipment during trail construction will be allowed only if the situation poses a safety hazard and there are no other non-mechanical means of eliminating or reducing the risk to an acceptable level. Alternative routes will be analyzed before the mechanical tool is utilized.

Search and Rescue (SAR) Activities Using Motorized Vehicles

Situation Description

Incidents involving SAR operations occur in the wilderness area several times each year. Under certain circumstances, motorized vehicles have been used for both searches and rescue activities.

Is use of motorized vehicles in SAR operations necessary?

The use of motorized transport for SAR activities is specifically provided for in 16 USC 1131-1136, Sec 4 (c). (The Wilderness Act, 1964). "Except as specifically provided for in this Act, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act **(including measures required in emergencies involving the health and safety of persons within the area)**, there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area." (emphasis added).

Alternatives:

No Action – The BLM would provide recommendations to the responding agency but defer decisions of whether or not to allow motorized vehicle use to the Humboldt County Sheriff's Office (HCSO).

Proposed Action – Agencies responding to SAR/EMS incidents would utilize cooperatively established protocols, as described in the proposed action, to assess each SAR/EMS incident and determine the appropriate role for the use of motorized vehicles in the response to the incident.

Conclusion and Determination of Minimum Activity:

The use of motorized vehicles may be necessary to protect human life and safety within wilderness. Motorized vehicle use would be authorized

through the use of cooperatively established protocols to determine the appropriate level of response.

Evaluation of National Register of Historic Places Eligibility

Situation Description

The King Range Wilderness hosts a number of archaeological deposits that are likely eligible for inclusion in the NRHP. Evaluation of those cultural resources to determine their unique eligibilities can be greatly facilitated through the use of advanced equipment such as ground-penetrating radar (GPR). Various models of GPR are on the market, but in general such equipment is relatively delicate and transporting large electronic devices of this nature may require the use of non-motorized wheeled devices.

Is NRHP eligibility evaluation of cultural resources required?

- No options exist outside the wilderness area.
- The action is not necessary to satisfy valid existing rights, nor is there is a special provision in wilderness legislation.
- The action is necessary to conform to direction contained in BLM policy, plans, or agreements with other entities.
- The action is necessary to preserve the qualities of wilderness character, including the area's cultural history.

Alternatives

No Action – Archaeological sites would not be evaluated, which is not a viable option due to their potential historical significance.

Proposed Action – Complete evaluations of eligibility using non-motorized hand tools only. Equipment would be transported in by pack animals. This alternative may be viable for most evaluation activities, but for most efficient and thorough investigations would not be feasible.

Conclusion and Determination of Minimum Activity:

The use of non-motorized, wheeled-vehicles may be necessary to transport equipment needed to perform NRHP evaluations of eligibility, where evaluations would be unfeasible without their use.

Non-motorized wheeled equipment use will only be allowed if the project directly benefits wilderness character and will otherwise have adverse impacts on wilderness values if not implemented. The following guidelines will be applied:

a. Only administrative or BLM authorized equipment will be used;

b. Non-motorized wheeled equipment use will occur where the equipment can be transported along existing trails during periods when the least amount of visitors are known to be in this area.

Punta Gorda Lighthouse Maintenance and Stabilization

Situation Description

The Punta Gorda Lighthouse is a significant historical landmark, interpretive site, and is listed in the National Register of Historic Places. It is a destination for many day hikers and a point of interest for backpackers. Major maintenance or renovation efforts are periodically needed to maintain the designated historic structure, which may require the use of motorized vehicles for transport of heavy material, and motorized equipment for repairs to the structure.

Is maintenance of this historic structure required?

The action is necessary to conform to direction contained in BLM policy, plans, or agreements with other entities, and to preserve the qualities of wilderness character, including the area's cultural history, a unique or supplemental value of wilderness.

Alternatives:

No-Action- Stabilization would occur using only non-motorized, non-mechanized equipment and transport. Full stabilization would not be feasible.

Proposed Action – Motorized transport of materials and equipment would be authorized to conduct stabilization activities.

Conclusion and Determination of Minimum Activity:

Motorized vehicles would be necessary to transport materials and equipment needed to stabilize the Punta Gorda Lighthouse. BLM would schedule maintenance activities and identify access routes to minimize impacts to wilderness visitors and other sensitive resources.

Debris and Trash Removal from Wilderness

Situation Description

Large quantities of industrial marine and other man-made debris wash up on the beach each year. Such debris ranges from plastic water bottles, ice chests, refrigerators, propane and other gas canisters, large plastic pieces from industrial seafood processing machinery, wheels and tires from cars, trucks, and heavy equipment, and commercial fishing drift

nets. Backpackers also leave debris and trash in backcountry campsites, such as: broken tents, cook ware, tarps, clothing and footwear. Other debris, including non-historic ranching facilities (fences, posts, barn remnants, etc.) also exists in the wilderness area. These man-made items degrade the area's naturalness. BLM backcountry staff, work crews, and volunteer organizations regularly collect and backpack out as much trash as possible. However, removal of larger, bulkier, and/or heavier items, or large quantities of debris may require the use of motorized vehicles.

Is it necessary to remove garbage and other debris from the wilderness?

The action is necessary to preserve the qualities of wilderness character, including the area's naturalness.

Alternatives:

No Action – Debris and trash would not be removed from the wilderness area. This alternative would result in increased degradation of the area's naturalness as debris washed onto the beach and trash discarded in backcountry campsites would accumulate year after year. Allowing trash accumulation would degrade wilderness character over time.

Proposed Action – Large debris would be removed periodically using motorized vehicles on established routes, where removal is infeasible using pack stock or labor crews.

Conclusion and Determination of Minimum Activity

Motorized vehicle use would be authorized if clean up cannot be accomplished by other means. For all instances of trash removal, the following guidelines would be applied:

1. Debris will be hauled out by non-motorized means whenever feasible.
2. Vehicle use will only be allowed if the project directly benefits wilderness character and will otherwise have adverse impacts on wilderness values if not implemented. When vehicles are authorized the following guidelines would be applied:
    a. Only BLM vehicles would be used;
    b. Vehicle use would be authorized only on the routes identified in Figure 2-12 as 1) the access corridor to private property designated by Public Law 109-362 (Kinsey Ridge Trail), and 2) the access route to Life Estate A (Cooskie Creek and Cooskie Spur Trails)

c. On the Kinsey Ridge Trail, vehicles, when parked, would be out of sight from any point along the beach;

d. Vehicles would be allowed to the bottom of the Kinsey Ridge Trail at the beach only for a short period when immediately loading heavy debris;

e. Vehicle use would occur during periods when no visitors are on or within sight of the Kinsey Ridge Trail or Cooskie Creek Trail. If this is not possible, vehicle use would occur on a weekday when the least amount of visitors are known to be in this area.

f. Vehicle use would serve multiple objectives. Bundling multiple tasks/projects/purposes for each motor vehicle would be required.

g. Motor vehicles would not be left for more than one workday – no overnight parking.

h. On Kinsey Ridge Trail, all vehicles on non-emergency mission/non-response to unauthorized uses would park at a designated site on the second switchback above Spanish Flat. Exception would be a maintenance vehicle in support of heavy equipment repairing Kinsey Creek stream crossing.

i. On Cooskie Creek Trail, all vehicles on non-emergency mission/non-response to unauthorized uses would drive no farther west than Gorda 2, nor south and west of historic sheep shearing shed and livestock corrals location.

j. Vehicles would be allowed to the bottom of the Cooskie Spur Trail at the beach only for the minimum time required to load debris already staged at that site.

Appendix D – Minimum Impact Suppression Techniques (MIST) Implementation Guidelines For Fire Suppression & Worksheet for use of Tracked Equipment

MIST Implementation Guidelines

Establishing and Setting Up Camp

- Whenever possible, avoid establishing spike or primitive camps in wilderness.
- If wilderness camps are unavoidable, use existing, or previously impacted campsites where available.
- If existing campsites are not available, use your local resource advisor to help identify the most resilient sites in rocky or sandy soils. Always select sites that are unlikely to be observed by wilderness visitors.
- Avoid camping in wet meadows or along streams.
- Consider impacts on both present and future visitors. An agency commitment to wilderness values will promote those values to the public.
- Layout camp components carefully from the start. Define cooking, sleeping, latrine, and water supplies.
- Limit travel ways within, to, and from camp.
- Minimize disturbance to land in preparing bedding and campfire sites. Do not clear vegetation, trench, or excavate a flat spot to create bedding sites.
- In small camp situations (one crew), individuals should use the "cat-hole" method of disposing of human waste. Toilet seats should be located a minimum of 200 feet from water sources. Holes should be dug 6–8 inches deep.
- If a large number of firefighters are using a spike camp and the camp is being serviced by helicopter, fly in portable backcountry latrines, and fly out human waste as necessary. If the camp does not have air support, establish community latrines well away from water sources, rather than leaving it up to the individual.
- Place indoor-outdoor carpet, scrim, or other material on the ground to protect vegetation in the most heavily traveled areas of camp (i.e., kitchen, campfire, and washing-up areas).

- Use stoves for cooking. If a campfire is built for warmth in the evening, build either a pit or mound fire. A fire shelter placed beneath the coals provides extra protection for the soil.
- Designate a common area for personnel to wash up. Provide fresh water, biodegradable soap, and a place for waste water.
- Carry water and bathe away from streams. Do not introduce soap, shampoo, or other personal grooming chemicals into waterways.
- Devise a plan for disposing of waste water from kitchen and washing areas.
- Store food properly so that it is not accessible to wildlife. Store food away from the campsite (300 feet is ideal) to reduce the risk of human and bear conflicts.
- Do not let garbage and food scraps accumulate in camp. All garbage and food scraps need to be removed from the camp on a regular basis if the camp is being served by a helicopter, or properly stored if frequent removal is not possible.
- Use dead and down firewood. Use small diameter wood that burns down more cleanly. Don't burn plastics or aluminum - pack it out with the rest of the camp garbage.
- Do not use nails in trees.
- Constantly evaluate the impacts that will occur, both short and long term.

Helispot Construction

- Whenever possible, locate helibases in weed free areas, to prevent the transport of noxious weeds into wilderness.
- When planning for helispots, determine the primary function of each helispot (i.e., crew shuttle, logistical support, or both).
- If a helispot is only needed for logistical support to deliver and retrieve supplies or gear, consider using a long line remote hook in lieu of constructing a helispot.
- If a helispot is needed for crew shuttle, consider the minimum size helicopter that could do the job, if you have an option, and still meet suppression objectives.
- Use natural openings as much as possible. If some tree falling or cribbing is necessary, avoid high visitor use locations unless the modifications can be rehabilitated to be generally unnoticeable. Feather the opening so that it appears more natural looking.
- Perform an aerial reconnaissance of the fire area and select potential helispots. In determining helispot locations, involve, at a minimum, the air operations manager, responsible land manager or

resource advisor, and the helitack foreman. Consider drawing a sketch and discuss which trees need to be cut to ensure a safe operation for the size of the helicopter deemed necessary or available.

- If a high level of resource impact is anticipated from a proposed helispot, evaluate carefully whether it is absolutely necessary and if there isn't an alternative outside wilderness.
- Whenever possible, the resource advisor should observe the construction of a helispot.

Fire Lining Phase

- Select procedures, tools, and equipment that least impact the environment.
- Give serious consideration to the use of water as a firelining tactic.
- Do not paint or deface vegetative or geologic features.
- If there is a risk that hose coming direct from a local unit's cache is contaminated with noxious weed seeds, order fresh hose from the regional cache.
- Resource advisors, operations chief, and logistics chief should be cognizant of any equipment that is being moved from a non-wilderness fire to a wilderness fire and make attempts to clean equipment of noxious weed seeds prior to it being used in the wilderness.

In light fuels consider:

- Cold-trail line. Constantly recheck.
- Allowing fire to burn to natural barriers.
- Burn out and the use of a "gunny" sack or swatter.
- If constructed fireline is necessary, use minimum width and depth to check fire spread.

In medium and heavy fuels consider:

- Use of natural barriers and cold-trailing.
- Cooling with dirt and water and cold-trailing.
- If constructed fireline is necessary, use minimum width and depth to check fire spread.
- Minimize bucking to establish fireline. Preferably move or roll material out of the intended constructed fireline area. If moving or rolling is not possible, or the down log is already on fire, build line around the log and let it be consumed.

In aerial fuels, brush, trees, and snags:

- Minimize cutting of trees and snags.
- Live trees should not be cut unless it is determined they will cause fire spread across the fireline or seriously endanger workers. If tree cutting occurs, cut the stumps flush with the ground and camouflage the cut surface with soil or brush.
- Scrape around tree bases near fireline if hot and likely to cause fire spread.
- Identify hazard trees with an observer, flagging, and/or glow-sticks.

When using indirect attack:

- Do not fall snags outside the constructed fireline, unless they are an obvious safety hazard to crews working in the vicinity.
- On the intended burn-out side of the line, fall only those snags that would reach the fireline should they burn and fall over. Consider alternative means to falling (i.e.,fireline explosives or bucket drops).
- Review consideration listed above for aerial fuels, brush, trees, and snags.

Mop-up Phase

- Use gravity socks in streams and/or a combination of water blivits and fold-a-tanks to minimize impacts to streams.
- Do not bring in any non-native materials to be used for sediment traps in streams. Use of non-native materials creates a risk that noxious weeds will be introduced to the area.
- Place absorbent cloth under pumps to avoid spilling fuel on the ground.
- Personnel should avoid using rehabilitated firelines as travel corridors whenever possible because of potential soil compaction and possible detrimental impacts to rehab work (i.e., water bars).
- Consider using infrared detection devices along perimeter (aerial or hand-held).
- Align saw cuts to minimize visual impacts from more heavily traveled corridors. Slope cut away from line of sight when possible.

In light fuels:

- Cold-trail areas adjacent to unburned fuels.
- Do minimal spading; restrict spading to hot areas near fireline only.
- Use extensive cold-trailing to detect hot areas.

Medium to heavy fuels:

- Cold-trail charred logs near fireline; do minimal scraping or tool scarring.
- Minimize bucking of logs to check for hot spots or extinguish fire; preferably roll the logs and extinguish the fire.
- Return logs to original position after checking or when ground is cool.
- Refrain from making bonepiles; burned and partially burned fuels that were moved should be arranged in natural position as much as possible after they are cold.
- Consider allowing larger logs near the fireline to burn out, instead of bucking them into manageable lengths. Use a lever or pry bar to move large logs.

Aerial fuels, brush, small trees, and limbs:

- Remove or limb only those fuels which, if ignited, have the potential to spread fire outside the fireline

Burning trees and snags:

- First consideration is to allow burning trees or snags to burn themselves out or down. Ensure adequate safety measures are communicated.
- Identify hazard trees with an observer, flagging, and/or glow-sticks.
- If burning trees/snags pose serious threat of spreading fire brands, consider attempting to extinguish fire with water or dirt. Felling chainsaw should be last means, consider falling by blasting, if available.

Aquatic Invasive Species Mitigation Measures

To minimize the potential transmission of aquatic invasive species, it is recommended that fire personnel:

- Consult with local biologists, resource advisers and fire personnel for known aquatic invasive species locations in the area and avoid them when possible.
- Avoid entering (driving through) water bodies or saturated areas whenever possible.
- Avoid transferring water between drainages or between unconnected waters within the same drainage when possible.
- Use the smallest screen possible that does not negatively impact operations and avoid sucking organic and bottom substrate material into water intakes when drafting from a natural water body.

- Avoid obtaining water from multiple sources during a single operational period when possible.
- Remove all visible plant parts, soil and other materials from external surfaces of gear and equipment after an operation. If possible, power-wash all accessible surfaces with clean, hot water (ideally > 1400 °F) in an area designated by a local resource advisor.

Fire Situation Analysis for Use of Track-Type Equipment

During Initial Attack Operations

DESCRIPTION

FIRE NAME_____ INCIDENT #_____

DATE_____

LOCATION:_____ TIME_____

ANALYSIS

		YES	NO
1.	FIRE LOCATION - SUPPRESSION		
	A. IS THE UNIT CURRENTLY AT DRAWDOWN	[ ]	[ ]
	B. FIRE ACCESSIBLE TO ENGINES/CREW	[ ]	[ ]
	C. STRUCTURES THREATENED	[ ]	[ ]
	D. VOLATILE FUEL TYPE	[ ]	[ ]
2.	SUPPRESSION RESOURCES REQUIRED TO CONTROL THE FIRE WITHIN THE FIRST BURNING PERIOD		
	A. FIRE CREWS	[ ]	[ ]
	B. ENGINE	[ ]	[ ]
	C. AIRTANKERS	[ ]	[ ]
	D. HELICOPTERS	[ ]	[ ]
	E. DOZERS	[ ]	[ ]
3.	CRITICAL FIRE WEATHER		
	A. CURRENT	[ ]	[ ]
	B. PREDICTED	[ ]	[ ]

4. EXTREME FIRE BEHAVIOR

A. CURRENT	[ ]	[ ]
B. PREDICTED	[ ]	[ ]

NOTES:

_____

_____

_____

5. ENVIRONMENTALLY SENSITIVE AREA	YES	NO
A. WILDERNESS AREA	[ ]	[ ]
B. AREA OF CRITICAL ENVIRONMENTAL CONCERN	[ ]	[ ]
C. ARCHAEOLOGICAL SITES	[ ]	[ ]
D. RARE, THREATENED & ENDANGERED ANIMALS AND/OR PLANTS	[ ]	[ ]
E. ADVERSE IMPACT TO ENVIRONMENTALLY SENSITIVE AREAS BY USING DOZERS	[ ]	[ ]

DECISION

DOZER USE [ ] IS [ ] IS NOT SELECTED BECAUSE:

_____

_____

_____

_____

_____

_____

_____

_____

BY_____ DATE_____
CALFIRE INCIDENT COMMANDER

BY_____ DATE_____
BLM AGENCY REPRESENTATIVE

Appendix E – Annual Trail Work Plan

Background

There are more than 80 miles of designated trails in the King Range Wilderness. Many of these trails are at least in part on former roadbeds, some of which were built long before engineering standards for trails or roads existed. The LCT is, for much of its length within the influence zone of ocean waves and tides. The remainder of King Range trails are situated on steep slopes with loose, friable soils.

In addition to these factors of design, topography, and geology, the peaks of the King Range Wilderness routinely receive more than 150 inches of rain per year. The resultant runoff into the short, steep drainages lead to frequent landslides, sloughing, and gullying of even well-constructed trail tread. The frequent rains and relatively long growing season lead to rapid vegetation growth which can quickly obscure unmaintained trails.

Trail Construction Standards

Construction of new trails or reroutes to existing trails will be completed in accordance with BLM Handbook 9114-1, as well as the Area-Wide Standards and Guidelines for Trail Construction (REC SG1 – REC SG10) found in the King Range NCA RMP. Existing trails will continue to be maintained as close as is practicable to these standards.

Trail Monitoring

Trails are annually assessed each spring for maintenance needs. This annual assessment measures levels of erosion, numbers of wind-fallen trees, and encroachment from vegetation adjacent to the trail. Information from these assessments is used to assign specific projects to summer work crews.

Trail Maintenance

Trail maintenance issues which pose a threat to public safety will be addressed first in the course of each summer's trail maintenance schedule. Each trail in the King Range will then be cleared of windfallen trees which are a barrier to backpackers or equestrian users. Some fallen trees of greater than 4 but less than 10 inches diameter at trail centerline which have no projecting limbs may be left uncut if no portion of the tree is

more than 10 inches above the ground. Very large trees, greater than 48 inches diameter, may be beyond the capabilities of most trail-portable handsaws (i.e., cross-saws) used for annual windfall removal. Where possible, these large trees will be initially notched in order to allow for hikers to safely pass. These trees may be removed with more specialized cross-cut saws at a later date. In exceptional circumstances, where there are large numbers of downed trees including large trees down in a small area, powersaws may be used with management approval. Powersaws will not be used in the King Range Wilderness unless crews with handsaws have put forth considerable effort over several days and failed to clear a section of trail. Powersaw use will only be approved after a determination has been made and documented by the manager that such saws are the minimum tool necessary (refer to Appendix C for specific criteria that would necessitate motorized equipment).

After completion of these annual projects, trails will be cleared of encroaching vegetation every two to four years based on need. A six-foot-wide minimum trail corridor will be maintained free of projecting limbs, brush, and debris on all King Range Wilderness trails (Figure D-1). Trail corridors may be periodically cleared up to 10 feet wide in areas such as Chemise Mountain and upper Rattlesnake Ridge, where routes traverse stands of dense chaparral.

Erosion mitigation and tread maintenance will also be carried out every 2–4 years based on need. Trail tread will be maintained 12–16 inches wide. Existing tread greater than 16 inches wide will be allowed to revegetate naturally where possible, though some areas may require decompaction and revegetation with handtools. Drainage structures will be placed as needed and maintained in conjunction with scheduled tread maintenance.

Trail structures such as log cribbing and turnpike will be maintained every 5-10 years based on need. Natural materials such as on-site timber and stone will be utilized wherever possible.

Beach portions of the LCT will receive maintenance only when necessary to remove hazards. Trail crews will not modify the orientation of rocks or logs below the highest tide mark for the convenience of hikers. Minimal signage such as direction signs or cairns may be used in the beach zone to direct hikers away from hazards.

Designated backcountry camp areas in the wilderness will be maintained as needed to remain free of hazards or obstructions. For example, dead standing trees may be removed from within camping areas.

Developed springs exist within the wilderness at Pinnacle, Bear Hollow, and Bonus Spring. These springs must be periodically cleaned or rebuilt in order to maintain their water flow. Spring developments will be maintained as needed using hand tools.

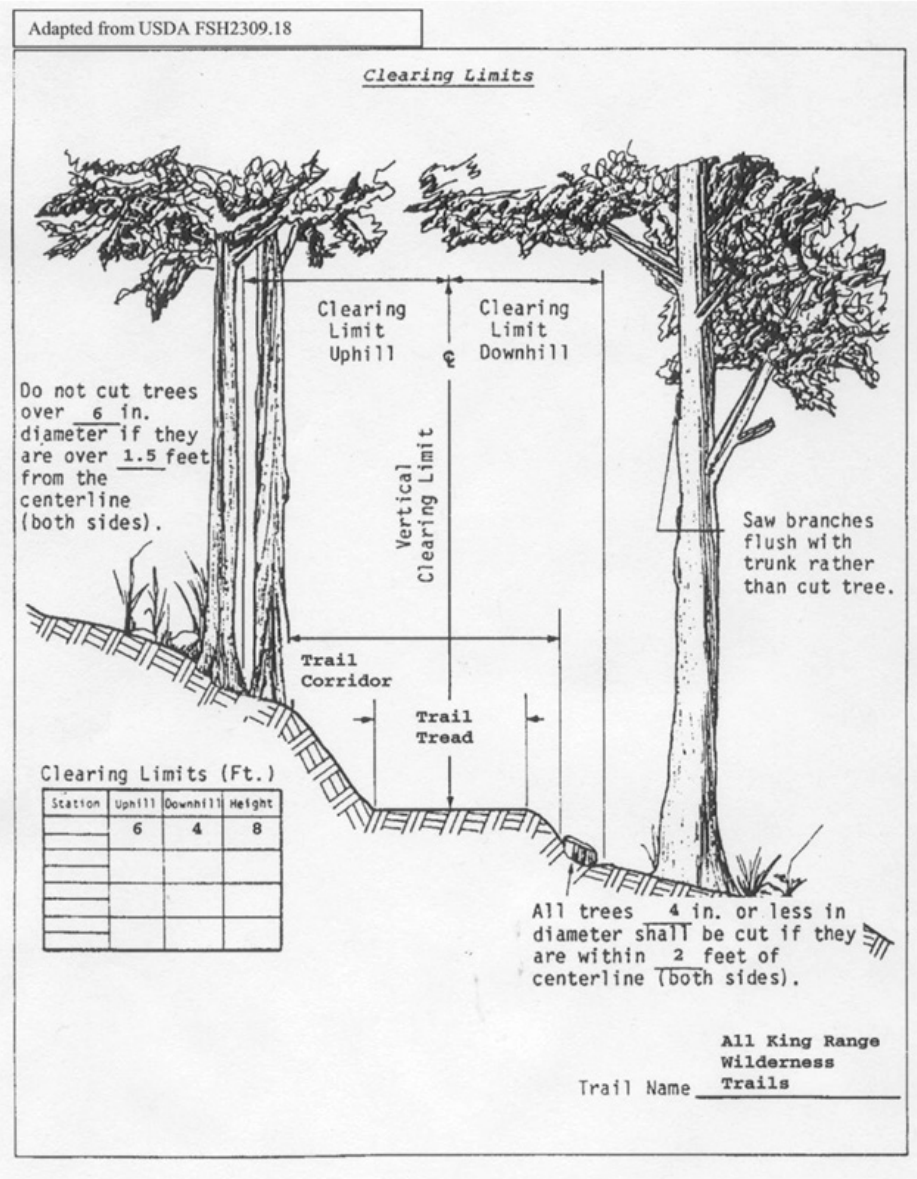

Figure D-1 Clearing limits for trails in relation to tree diameters, horizontal distance, and height above trail tread

Appendix F – Search Urgency Worksheet

King Range National Conservation Area - Search Urgency Worksheet

Subject Profile:	Value	Subject Rating
Age		
Very young	1	
Very old	1	
Other	2–3	
Medical Conditions		
Known/suspected injured/ill or mental problems	1–2	
Healthy	3	
Known fatality	3	
Number of subjects		
One alone	1	
More than one (unless separation is suspected)	2–3	
Subject Experience Profile		
Not experienced, does not know the area	1	
Not experienced, does know the area	1–2	
Experienced, does not know the area	2	
Experienced, does know the area	3	
Weather Profile/Consider Marine Forecast for LCT		
Recent and/or existing hazardous weather, tides, or swell	1	
Predicted hazardous conditions (eight hours or less)	1–2	
Predicted hazardous conditions (more than eight hours)	2	
No hazardous weather, tides, or swell predicted	3	
Equipment Profile		
Inadequate for environment or weather	1	
Minimal for environment or weather	1–2	
Adequate for environment or weather	3	
Terrain/Objective Hazards Profile		
Subject known or suspected in hazardous area such as tide zone	1	
Few or no hazards suspected	2–3	
TOTAL	7–21	

The lower the numerical rating calculated on this worksheet, the higher the relative urgency becomes.

- Potential searches which rate in the 7–12 value range should be considered most urgent. Management should strongly consider utilizing aircraft and mechanized vehicles to facilitate a quick response time.
- Potential searches in the 13–15 value range should be considered moderately urgent. Management should weigh the specifics of the case and may choose more limited use of mechanized vehicles.
- Potential searches in the 16–21 value range should be considered least urgent. Most searches in this range will utilize non-mechanized search techniques.

This worksheet is adapted from the Urgency Chart in LaValla and Stoffel 1987.

Appendix G – Research Stipulations

General Conditions

Use of mechanized or motorized transport, motorized equipment, or placement of structures of any kind is prohibited unless the applicant can show, through proper analysis procedures (wilderness minimum requirements decision analysis), that such equipment is the minimal necessary tool to support the research. Undertaking such an analysis is the responsibility of the applicant. BLM will review any analysis and may or may not concur with findings.

- Unless authorized by the U.S. Fish and Wildlife Service, permit holders shall comply with seasonal and daily operating period closures due to marbled murrelet and northern spotted owl activity.
- Permit holders shall comply with wet-season operating restrictions.
- Permit holders shall only use existing trails unless otherwise authorized.
- Any removal of natural features is allowed at the same levels provided for the general public (e.g., removal of non-commercial quantities of wood or cones or rocks). Otherwise, removal or manipulation of natural materials will require written authorization by the BLM.
- Permit holders shall limit the use of flagging, marking of survey stations, and other intrusions. All flagging and markings must be removed after project completion. Biodegradable flagging shall be used unless otherwise authorized.
- Permit holders shall take all necessary actions to minimize impacts on visitors, wildlife, and ecosystems (e.g., food storage, trash storage, use of bear canisters).
- Activities that result in ground disturbance (e.g., hand excavation of small soil pits and hand- augering) shall be kept to the minimum size and number required to collect the necessary information. The BLM shall be provided with a map for review prior to permit issuance that identifies proposed areas of soil disturbance. This is to ensure that areas with cultural or other sensitive resource values are avoided.
- Measures shall be implemented to remove evidence of ground disturbance upon completion of the activity.

In addition:

- No littering of any kind, including discharge of chemical or biodegradable substances.
- Researchers must carry a copy of their research permit on their persons and display a copy on the dashboard of vehicles parked at trailheads.
- Research communication radio speakers must be no louder than a normal human voice in quiet conversation.
- Radios, music playing devices, howling, and hooting are prohibited.
- Avoid or minimize disturbance to vegetation, downed logs with cryptogamic communities, and other natural elements of the forest floor.
- Follow all fire restrictions which pertain to visitors with in the King Range NCA.

Research Permit Application Procedure

Research Permit Procedure Guidelines

The following guidelines will apply to all permit applications for research/monitoring.

Permit Authorization: BLM will authorize research and monitoring proposals under 43FR 2920, "Leases, Permits, and Easements through issuance of a Special Use Permit."

Qualified Applicants: Any individual may apply if he/she has qualifications and experience to conduct scientific studies or represents a reputable scientific or educational institution or a federal, tribal, or state agency.

Processing Time Requirements: It is recommended that application for permits be received by BLM at least 90 days in advance of first planned field activities. Projects requiring access to restricted locations or during critical nesting seasons or projects proposing activities with sensitive resources, such as threatened and endangered species or cultural sites, usually require extensive review.

Additional Required Approvals: In some cases, other federal or state agency permits or approvals may be required before BLM can approve an application for a research/monitoring permit. The principal investigator is required to provide BLM with copies of such permits with its application. Applicants are encouraged to contact BLM staff to determine if additional permits may be required in conjunction with a proposed study.

Location of Application: Application materials may be obtained from the BLM Arcata Field Office at 1695 Heindon Road, Arcata, California 95521 (Phone: (707) 825-2300). All application materials must be submitted to this office.

Research Proposal: Applications for research/monitoring permits must include a research proposal.

Proposal Review: Each proposal will be reviewed for compliance with NEPA, the federal Endangered Species Acts, and requirements of other laws, regulations, and policies. The Arcata Field Manager may also require internal and/or external scientific review, depending on the complexity and sensitivity of the work being proposed and other factors, such as the availability of staff expertise for adequate evaluation. The applicant may expedite review of proposal by providing existing peer reviews or by providing names and addresses of appropriate persons recommended to assist in review of the proposal.

Timing of Review: The time required to review the permit application and accompanying study proposal will be proportional to the type and magnitude of the proposed research/monitoring. A single visit to the wilderness for a nonmanipulative research project will require a relatively simple proposal, and the permitting decision will be expedited. A highly manipulative or intrusive investigation having the potential to affect nonrenewable, rare, or delicate resources or need detailed planning or logistics will require more extensive and longer review.

BLM Response: The principal investigator will receive notice of the approval or rejection of the application by written correspondence via mail, electronic mail, or facsimile. If modifications or changes in a study proposal initially determined unacceptable would make the proposal acceptable, BLM will suggest them at this time. If the application is rejected, the applicant may consult with BLM staff, clarify issues, suggest modifications, and make an amended application if appropriate.

Performance Procedures: If the proposal is approved, the applicant will receive a copy of a Special Use Permit, which must be signed and returned. The permit will then be validated and an approved copy returned to the applicant, at which time activities within the wilderness may begin. A list of names of all persons involved in field research must be provided to BLM. The lead field researcher must meet with assigned BLM staff at the Arcata Field Office prior to the first field visit. A copy of the permit must be carried at all times by all field staff while performing authorized activities within the wilderness. The permit must also be displayed prominently on all vehicles accessing the site.

Criteria for Approval of Research Proposals

Several factors will be considered in evaluating proposed research within the wilderness (see "Implementation Guidelines"). The primary factor favorable for approval is a showing that the research contributes information useful to an increased understanding of the wilderness resources and thereby contributes to effective management and/or interpretation of resources or addresses problems or questions of importance to science or society and shows promise of making an important contribution to such knowledge.

Implementation Guidelines: Research Proposal Evaluation Criteria

Several factors will be considered by BLM in approving research in the wilderness. Favorable and unfavorable factors, as well as specific information needs, are described in this section.

The suitability of proposed research increases when:

- Information is useful to an increased understanding of wilderness resources and thereby contributes to effective management and/or interpretation of resources.
- Information will be shared with BLM, including any manuscripts, publication, maps, and databases that the researcher is willing to share.
- Problems or questions are of importance to science or society and show promise of making an important contribution to knowledge of the subject matter.
- A researcher and support team with a record of accomplishment in the proposed field of investigation have demonstrated ability to work cooperatively and safely and to accomplish the desired tasks within a reasonable timeframe.
- The researchers prepare occasional summaries of findings for public use, such as seminars and brochures.
- Natural and cultural resources, operations, and visitors are not disrupted.
- Cataloging and care of collected specimens is planned.
- Detail about provisions for meeting logistical needs are provided.
- The research is supported academically and financially.
- Fieldwork, analyses, and reporting will all be completed within a reasonable time frame.

The suitability of proposed research diminishes when:

- Activities adversely affect the wilderness character or the experiences of visitors.
- There is potential for adverse impact on natural, cultural, or scenic resources, particularly on nonrenewable resources, such as archaeological and fossil sites or special-status species.
- The research is redundant to previous research conducted within the wilderness or in other similar ecosystems (unless designed to corroborate studies in other areas).
- Potential exists for creating risk of hazard to the researchers, visitors, or ecosystem integrity.
- Extensive collecting of natural materials is planned or unnecessarily replicates existing voucher collections.
- Substantial logistical, administrative, curatorial, or project monitoring support by BLM staff is required.
- Time is insufficient to allow necessary review and consultation.
- The researcher lacks scientific institutional affiliation and/or recognized experience conducting scientific research.
- Scientific detail and justification are inadequate to support achieving the study objectives.

Finally, research proposals must address the following elements to receive consideration:

- Mechanical equipment/devices or potentially hazardous materials to be used.
- Numbers of staff entering the wilderness.
- Duration and frequency of field visits.
- Degree of staff intrusion into old-growth forest grove.
- Conformance with seasonal and daily operating period closures due to marbled murrelet or northern spotted owl activity.
- Conformance with wet-season operating restrictions.
- Use of existing roads and trails.
- Limit the use of flagging, marking of survey stations, and other intrusions.
- Actions to minimize impacts on visitors, wildlife, and ecosystems (e.g., food storage, trash storage).